The Honorable Commissioners
Federal Communications Commission
Washington, DC

Re: Proceeding 03-104
Comments Regarding Broadband over Power Line Access

Dear Commissioners:

I am considered by many, to be a qualified expert in various facets of Electronics Technology, Telecommunications, and Network Systems Support. I have worked in the industry for over 30 years and hold numerous licenses and certifications relating to the same. I hold certifications in Electronics and Computer Network System, specifically Master Certified Electronics Technician, Senior Certified Network System Technician, Computer Service Technician. I also hold the Commercial General Radio Telephone Operators License with Radar Endorsement (PG-GB-016568), and Amateur Radio Service License (Amateur Extra – K5III). Having hopefully qualified myself, I wish to submit my comment relating to the current proceeding 03-104 relating to delivery of Broadband over Power Line Access.

1. The idea of the distribution of broadband access over power line is fundamentally an exciting idea. The ability to use current infrastructure in applications of advanced technology would also seem cost effective making the idea even more attractive. However, the proposed methods, even superficially, are quite flawed.
2. The proposal uses spectrum from 2 mHz to 80 mHz , This frequency space is currently allocated to government, military, public safety, land mobile, navigation, broadcast, fixed service, and Amateur Radio Services. Radio Frequency radiation in the region from 2-80 mHz can travel thousands of miles with power levels as low as .0006 watts ERP.
3. If power lines were a viable medium for RF distribution, they would have already been adapted for use by cable television service providers. Cable television utilizes frequency space from 54 mHz through 300 mHz, which is included as part of the proposed spectrum. Power Line distribution of Cable Television was deemed incompatible due to potential incidental radiation which could disrupt commercial broadcast, military, public safety, land mobile, navigation, fixed service, and amateur radio service communications.
4. Many Part 15 devices, which utilize RF distribution via power lines, do not use these frequencies, but instead operate from 100 to 300 kHz. (household power control devices marketed under the brand name X10, room to room FM audio baby monitors, and household intercom systems use the 100 to 300 kHz spectrum.)

5. This technology has already been tested in a number of countries and again found to be incompatible with existing services due to incidental radiation by power lines.
6. Even at low signal levels, incidental radiation of signals via unshielded, bare power lines could travel hundreds or thousands of miles. In close proximity, from test reports, incidental radiation has produced "digital signatures" that have resulted in signal levels of ambient noise of S9 +30db on Amateur Radio Bands which, in effect, renders any communication impossible. Bare, unshielded wire, will radiate on some frequency or multiples of frequencies.
7. The FCC denied a petition by the Amateur Radio Community for an LF allocation on 136 kHz due to proximity to Power Grid Control frequencies in which it stated RF fields, even at the lowest signal levels, could potentially interfere with the Power Grid control signals. If this is true, then the opposite should be true, also. Even low level signals from the power grid could potentially interfere with commercial and public safety communications.
8. Interference from incidental radiation of RF would not be localized, but widespread, due to normal propagation characteristics of signals at these frequencies, potentially disrupting all HF and low VHF communications.
9. I urge, you the commissioners, to reject this proposal as flawed, technically unsound and take no action to approve it.
10. In the strongest terms, I DO NOT support this proposal for BPL Access.

Respectfully,

Eric Funderburk
San Antonio, Texas